A Novel Methylene Dithioether as a Ligand: Synthesis and Molecular Structure of a Zinc(II) Complex with N_4S_2 Coordination Environment

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The octadentate ligand $[N(CH_2CH_2NH_2)(CH_2CH_2CH_2OH)(CH_2CH_2S)]_2CH_2$, $(NNOS\text{-}232)_2CH_2$, was synthesized accidentally by the reaction of the unsymmetrically substituted tripod $[N(CH_2CH_2NH_2)(CH_2CH_2CH_2OH)(CH_2CH_2SH)]$, NNOS-232, with dichloromethane in the presence of aluminum hydroxide. Ligand $(NNOS\text{-}232)_2CH_2$ was reacted with zinc bis(perchlorate) hexahydrate to yield the complex $[Zn((NNOS\text{-}232)_2CH_2)](ClO_4)_2$ **1** exhibiting a distorted octahedrally coordinated zinc atom in an N_4S_2 coordination environment, as shown by an X-ray diffraction study.

Key words: Zinc, Dithioacetal, Tripodal Ligands